

Stationary Engineer

Knowledge, Skills, Abilities, and Personal Characteristics Statements

1	Knowledge of heating, ventilation, and air conditioning (HVAC) systems, to assess repair needs and determine the proper course of action to fix malfunctioning units.
2	Ability to repair heating, ventilation, and air conditioning (HVAC) systems to ensure properly functioning systems in building/facility.
3	Knowledge of elements of a refrigeration system (e.g., compressors, condensers, evaporators, traps, pumps, valves) to assess repair needs and determine the proper course of action to fix malfunctioning units.
4	Ability to repair refrigeration units to ensure properly functioning systems in building/facility.
5	Knowledge of building electric and pneumatic controls to assess building functions and determine the need for repair and replacement of building systems.
6	Knowledge of automated building systems (e.g., energy management systems) to assess building functions and determine the need for repair and/or replacement of building systems.
7	Ability to repair automated building systems (e.g., energy management systems) to ensure properly functioning systems in building/facility.
8	Knowledge of electrical, water, sewage, and other mechanical systems to assess repair needs and determine the proper course of action to fix malfunctioning units.
9	Knowledge of the principles and methods (e.g., sequences of installation, coordination with other trades, conduit bending, wire pulling, rating of equipment) used in the installation, maintenance, and repair of electrical systems and components (e.g., wiring, switches, lighting, transformers, high voltage, switchboards, motor control centers) to accomplish work assignments.
10	Knowledge of materials, tools, and equipment (e.g., cable reels, conduit benders, stripping tools, voltage or current meters, wire or cable cutters) used in the installation, maintenance, and repair of electrical systems and components (e.g., wiring, switches, lighting, transformers, high voltage, switchboard, motor control centers, control modules, control boards) to accomplish work assignments.
11	Knowledge of the principles and operations of electrical equipment (e.g., wiring, switches, lighting, transformers, switchboards, motor control centers, control modules, control boards) for the installation, maintenance, alteration and repair of electrical systems and components.
12	Ability to repair electrical systems and components (e.g., wiring, switches, lighting, transformers, high voltage, switchboards, motor control centers, control modules, control boards) to accomplish work assignments.

13	Ability to troubleshoot electrical systems and components to ensure their safe and proper operation and adherence to electrical and building codes.
14	Ability to care for hand and power tools and other equipment to ensure safe and proper operations.
15	Knowledge of organizational policies and procedures to maintain safety and security of facilities/departments, staff, and property.
16	Ability to use hand and power tools to ensure safe and proper operation of the tools during the performance of daily assignments.
17	Knowledge of boilers and auxiliary boiler equipment to determine proper maintenance and care of facilities.
18	Ability to repair boilers, heaters, pumps, steam traps and valves to accomplish work assignments.
19	Knowledge of gas and water distribution systems to assess functionality of building systems and determine when repairs are needed.
20	Knowledge of steam distribution systems to assess functionality of building systems and determine when repairs are needed.
21	Ability to operate and repair building gas and water distribution systems as required to ensure properly functioning building facilities.
22	Ability to operate and repair building steam distribution systems as required to ensure properly functioning building facilities.
23	Ability to weld and solder as needed to maintain and repair building systems.
24	Knowledge of building water and sewage systems to assess building functions and determine the need for repair of building systems.
25	Ability to calibrate building control systems (e.g., air conditioning, refrigeration, heating, ventilation) to ensure proper system operation.
26	Knowledge of tools used by various trades (e.g., electrician, plumber, carpenter, stationary engineer) used in the maintenance and repair of building facilities.
27	Ability to find specific regulations in the California Code of Regulations, Division of Industrial Safety Orders that apply to building systems (e.g., heating, ventilation, air conditioning, boilers, refrigeration, electrical, water, sewage) to ensure building compliance and to maintain a safe work environment.
28	Ability to perform physical activities that require considerable use of limbs and body parts, such as climbing, crawling, lifting, balancing, walking, stooping, and handling of materials.
29	Ability to grasp, manipulate, or assemble objects used in the installation, maintenance, alteration and repair of building/facility systems.
30	Ability to lift and carry up to 50 lbs. used in the installation, maintenance, alteration, and repair of building/facility systems.
31	Ability to stand and perform work duties for an extended period of time used in the installation, maintenance, alteration, and repair of building/facility systems.

32	Ability to work in various temperatures (e.g., warm, hot, cold, freezing) to complete job tasks.
33	Ability to work in an environment that includes dust and other debris used in the installation, maintenance, alteration and repair of building/facility systems.
34	Ability to work in confined spaces for an extended period of time to complete job tasks.
35	Ability to work in various outdoor environments (e.g., sun, rain, wind, heat, cold) for extended period of time to complete job tasks.
36	Ability to instruct others (e.g., employees, contractors) on safety matters, on the maintenance of building structures, or for general educational purposes.
37	Knowledge of basic mathematical operations and calculations (e.g., addition, subtraction, multiplication, division, percentages, order of operations, fractions) to calculate labor, materials, and/or cost estimates for projects and work orders.
38	Ability to perform basic mathematical computations (e.g., addition, subtraction, multiplication, division, ratios, percentages) to calculate labor, materials, and/or cost estimates for projects, work orders and additions.
39	Ability to convert between units of measurement (e.g., temperature, energy, volume, mass) to calculate workloads and complete project work.
40	Ability to determine the accuracy of various mathematical calculations (e.g., addition, subtraction, multiplication, division, ratios, percentages) to verify labor, materials, and/or cost estimates for projects, work orders and additions.
41	Ability to interpret and work from rough sketches, plans, blue prints, drawings, and specifications to obtain/provide information for work projects.
42	Ability to prepare and develop rough sketches and addendums to existing plans to obtain/provide information for work projects.
43	Ability to maintain records and reports (e.g., timesheets, daily work orders, time reports) to provide information and documentation and to comply with departmental policies.
44	Ability to prepare clear and concise reports detailing work progress and/or needed facility repairs.
45	Ability to read and comprehend written materials (e.g., references, summaries, memos, letters, Material Safety Data Sheets [MSDS], operation and maintenance manuals) to apply information and determine appropriate courses of action.
46	Ability to learn common forms and documents (e.g., preventative maintenance forms, work order forms, work permits) used in the installation, maintenance, alteration and repair of building/facility systems.
47	Ability to provide written information to supervisors and co-workers to keep open lines of communication.

48	Ability to communicate with individuals or groups (e.g., supervisors, coworkers, subordinates, the public, vendors) to provide accurate information, instruction, direction, and maintain effective working relationships.
49	Ability to provide clear and accurate instructions and directions by verbal or other means to individuals with various levels of technical expertise.
50	Ability to operate communications equipment (e.g., two-way radios, mobile cell phones, computers) to communicate with management, departmental contacts, and others.
51	Ability to establish and maintain effective working relationships with others (e.g., employees, vendors, the public) to create productive working environments.
52	Ability to read and follow complex written instructions in order to carry out assignments according to departmental/management specifications.
53	Ability to communicate with diplomacy and tact, especially concerning difficult and sensitive issues when dealing with the needs, problems and/or concerns of others.
54	Ability to listen or receive information from others to facilitate an open exchange of ideas and provide for effective communication.
55	Ability to deal with irate or agitated individuals with diplomacy and tact to prevent further escalation of problems and/or concerns.
56	Ability to work independently on projects or assignments without close supervision or detailed instructions to maximize workplace productivity.
57	Ability to identify information, materials, and resources needed to complete a project or assignment.
58	Ability to be objective and flexible in adapting to changes in priorities, work assignments, and other interactions that may impact pre-established courses of action for completing projects and assignments.
59	Ability to maintain confidentiality to ensure compliance with applicable laws related to information security.
60	Ability to read blueprints, schematic diagrams, and/or shop drawings to determine necessity of repairs and scope of project.
61	Ability to identify and anticipate problems and act proactively to complete project work according to specifications.
62	Ability to determine the nature of repairs required for building systems and to determine necessary next steps including when to communicate/report to supervisor/management.
63	Ability to analyze and evaluate situations accurately and thoroughly to determine and implement effective, appropriate courses of action.
64	Ability to use logic and reasoning to identify the strengths and weaknesses of alternative approaches or solutions to allow for effective resolutions.
65	Ability to respond properly to an emergency situations, maintaining calm, authoritative demeanor to mitigate damage to property or personnel.

66	Knowledge of computer applications (e.g., Microsoft Word, Microsoft Excel, Microsoft Outlook) to assist in the completion of various work assignments.
67	Ability to operate electronic equipment (e.g., computers, faxes, copiers, scanners, printers, cameras, calculators, thumb drives) to complete various work tasks, including sending emails, completing reports, and maintaining records.
68	Ability to use a personal computer to input data, access information, and/or create materials and documents using a variety of software applications.
69	Ability to coordinate, instruct, and lead a work crew to ensure proper completion of work and compliance with State and Federal codes and regulations.
70	Ability to inspect the work of others to ensure proper completion of work and compliance with State and Federal codes and regulations.
71	Ability to plan and coordinate tasks with departmental trades people, and other facility/department program staff, contractors and vendors to provide direction, information, and ensure accuracy and completion of assignments.